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- 2 1. A method for processing multi-channel audio signals, comprising:
- determining the degree of correlation of two of the channels;
- 4 responsive to a determining that said two channels are correlated, normalizing
- 5 said channels according to a first normalization mode; and
- 6 responsive to a determining that said two channels are uncorrelated, normalizing
- 7 said channels according to a second normalization mode.
- 8 2. A method for processing multi-channel audio signal in accordance with claim
- 9 1, wherein said first normalization mode is a differential mode.
- 3. A method for processing multi-channel audio signals in accordance with claim
- 11 2., further comprising determining the phase relationship of said two channels
- 4. A method for processing multi-channel audio signals in accordance with claim
- 13 3, responsive to a determining that said two channels are substantially out of phase, said
- 14 differential mode is difference signal dominant.
- 15 5. A method for processing multi-channel audio signals in accordance with claim
- 16 3, responsive to a determining that said two channels are substantially in phase, said
- 17 differential mode is sum signal dominant.
- 6. A method for processing multi-channel audio signals in accordance with claim
- 19 1, wherein said second normalization mode is a common mode.
- 7. A method for processing multi-channel audio signals in accordance with claim
- 21 6, further comprising the step of determining an absolute value of a sum signal of said
- 22 two channels and an absolute value of a difference signal of said two channels.
- 8. A method for processing multi-channel audio signals in accordance with claim
- 7, responsive to a determining that said absolute value of said sum signal is greater than
- 25 said absolute value of said difference signal, said common mode is sum signal dominant.
- 9. A method for processing multi-channel audio signals in accordance with claim
- 27 7, responsive to a determining that said absolute value of said difference signal is greater
- 28 than said absolute value of said sum signal, said common mode is difference signal
- 29 dominant.

30	10 A method for processing multi-channel audio signals, comprising:
31	determining the degree of correlation of two of the channels;
32	responsive to a determining that said two channels are partially correlated and
33	partially uncorrelated, processing said channels according to a combination of a first
34	normalization mode and a second normalization mode.
35	11. A method for processing multi-channel audio signal in accordance with
36	claim 1, wherein said first normalization mode is a differential mode.
37	12. A method for processing multi-channel audio signals in accordance with claim
38	1, wherein said second normalization mode is a common mode.
39	13. A method for processing multi-channel audio signals in accordance with
40	claim 10, wherein said combination is a linearly weighted combination of said first mode
41	and said second mode.
42	14. A method for processing multi-channel audio signals in accordance with claim
43	13, wherein said first mode is a differential mode and said second mode is a common
44	mode.
45	15. A method for decoding an encoded multi-channel audio signal, comprising:
46	determining the correlation of a first channel and a second channel;
47	processing said first channel and said second channel to produce a third channel
48	and a fourth channel.
49	16. A method for decoding in accordance with claim 15, wherein responsive to a
50	determining that said first channel and said second channel are uncorrelated, said third
51	channel and said fourth channel are substantially uncorrelated.
52	17. A method for decoding in accordance with claim 15, wherein responsive to a
53	determining that said first channel and said second channel are substantially correlated,
54	said third channel and said fourth channel are substantially correlated.
55	18. A method for decoding an encoded multi-channel audio signal in accordance
56	with claim 15, further comprising determining an absolute value of a sum of said first
57	channel and said second channel.
58	19. A method for decoding an encoded multi-channel audio signal in accordance

59	with claim 18, wherein, responsive to said absolute value of said sum signal being greater
60	than said absolute value of said difference signal, said third channel and said fourth
61	channel are substantially correlated.
62	20. A method for decoding an encoded multi-channel audio signal in accordance
63	with claim 18, wherein, responsive to said absolute value of said difference signal begin
64	greater than said absolute value of said difference signal, said third channel and said
65	fourth channel are substantially uncorrelated.
66	21 An apparatus for processing multi-channel audio signals, comprising:
67	an input characteristics determiner for determining a degree of correlation of two
68	of the channels;
69	a first normalizing multiplier, coupled to said input characteristics determiner, for
70	applying a first normalizing coefficient to a first of said two channels, said normalizing
71	coefficient being responsive to said degree of correlation; and
72	a second normalizing multiplier, coupled to said input characteristics determiner,
73	for applying a second normalizing coefficient to said second signal, said normalizing
74	coefficient being responsive to said degree of correlation.